Library Future's Conference
June 13, 2019

Dr. Angela Hemingway
Idaho STEM Action Center

Table Talk

The Future of Idaho Education is Access to a Robust Education, Including STEM

In 2018,
6,328 STEM JOBS
WERE UNFILLED IN IDAHO,
resulting in nearly
$413 Million
of unclaimed personal income.

Idaho's STEM jobs
PAY WELL,
DOUBLE THE
MEDIAN WAGE
of non-STEM JOBS.

If these **STEM JOBS** were filled, state tax revenues would
INCREASE BY
OVER
$22 Million.

2018 (actual)

6,328 unfilled STEM jobs
$412 million in lost personal income
$22.4 million in lost tax revenue

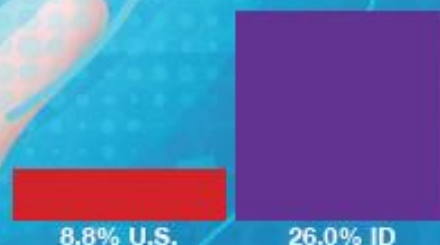## Actual STEM Tech Sector Growth 2004-2014

11.3% U.S.   0.4% ID

2024 (predicted)

~100,000 available STEM jobs
$350 million in tax revenue
$6.5 billion in personal income from Idaho's STEM economy

Predicted STEM Tech Sector Growth 2014-2024

8.8% U.S.   26.0% ID

IDAHO STEM ACTION CENTER

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Facts About Idaho Jobs

Idahoworks.gov has over 27,500 job opening with 6,500 that are hard-to-fill, open for 90+ days

Idaho has the fastest population growth, the 3rd fastest job growth, and 2nd fastest tech sector growth, 1st in wage growth

100% of Idaho industry believe employees should possess both technical and 21st century skills

A diverse, equitable, thriving ecosystem for a prosperous, STEM-literate Idaho

VISI⭕N

Engineering innovative opportunities for educators, students, communities, and industry to build a competitive Idaho workforce and economy through STEM and computer science education.
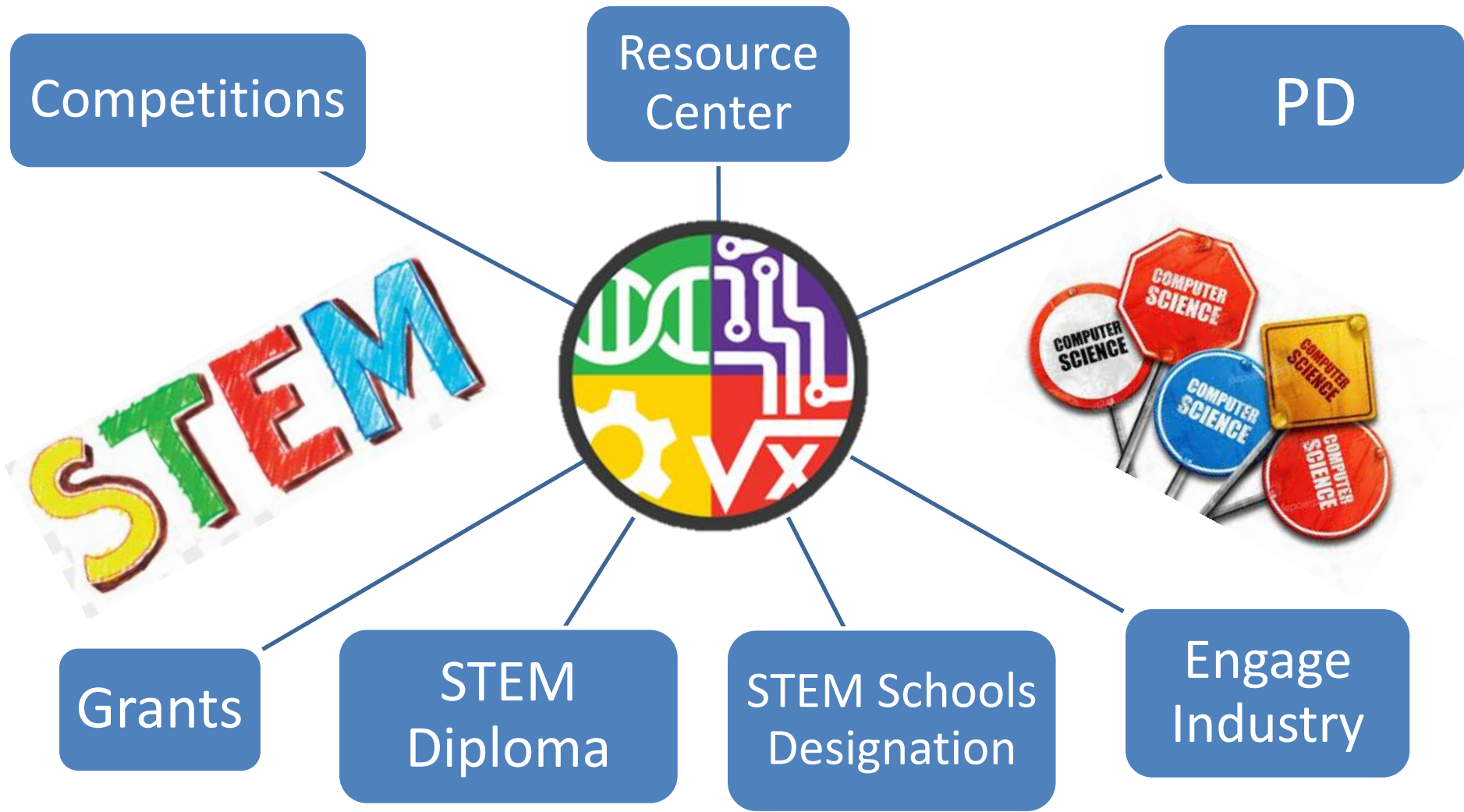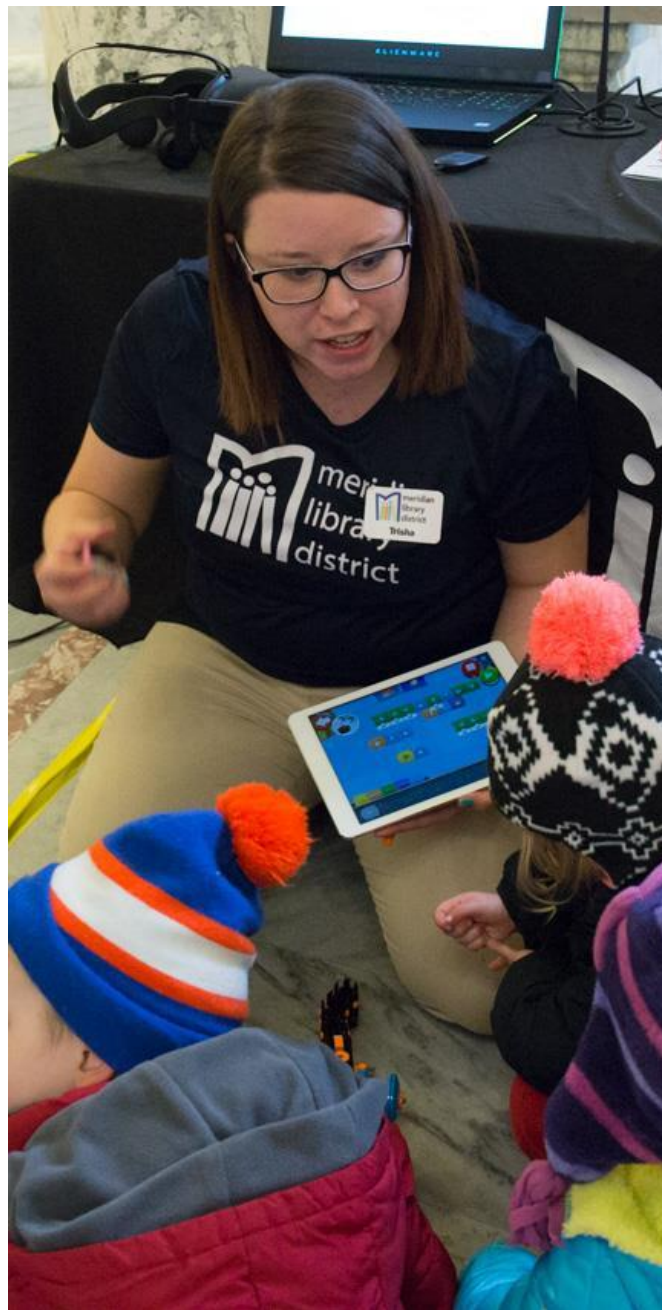
MISSI⭕N

Idaho STEM Action Center

Can you start my
STEM Action Center?

As Legislated in Idaho Code

Competitions

Resource Center

PD

Grants

STEM Diploma

STEM Schools Designation

Engage Industry

Under Represented

Wow! Libraries are so much more than books!

Many issues simply cannot be solved through formal education alone

STEM AC GOALS!

1. Advance equitable access to high-quality STEM+CS opportunities for **educators**, students, and communities

2. **Align** education and workforce needs throughout Idaho

3. Increase **awareness** of the importance of STEM throughout Idaho
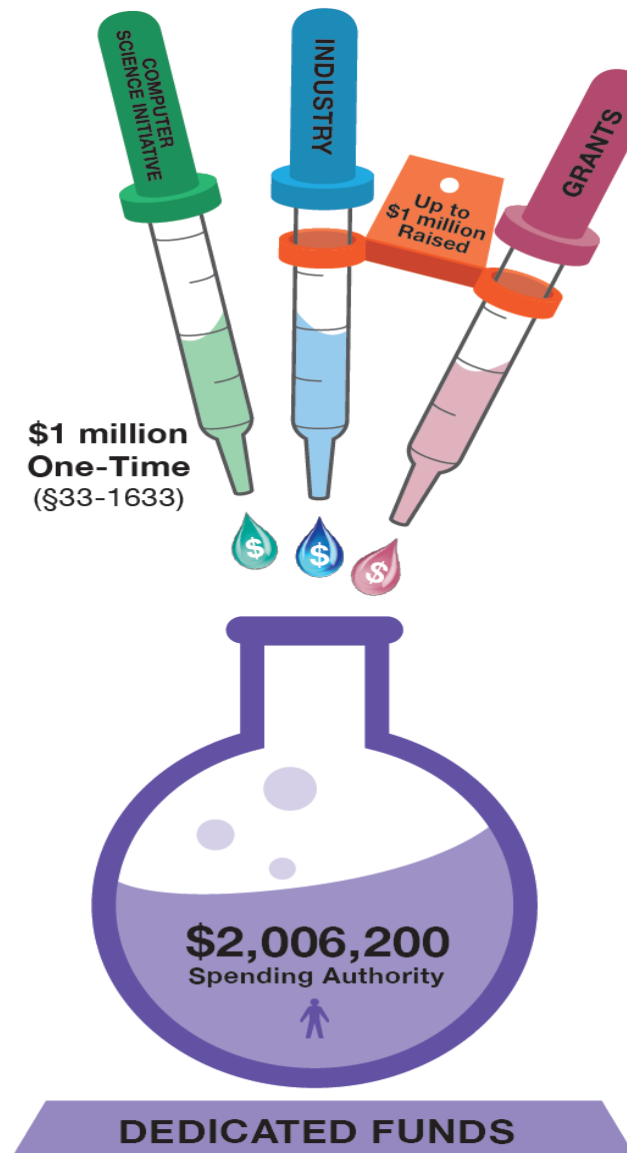
21st Century Skill Development

FY20 APPROPRIATION
$4,695,800*

$1M cash reduction for CS starting July 1, 2019

COMPUTER SCIENCE INITIATIVE

INDUSTRY

Up to $1 million Raised

GRANTS

$1 million One-Time (§33-1633)

~$2.08M Ongoing (§67-823)

Personnel Cost $507,400

$2,006,200 Spending Authority

DEDICATED FUNDS

$2,589,600

GENERAL FUND

*Includes $100,000 in miscellaneous spending authority

Glenns Ferry Library | Rural STEM Project

Tech Tuesdays
Tuesdays 3:30-5:30
Dedicated time for 3D printing, and play board games with us while you wait for your print! Ages 7 and up.

McCall Public Library

McCall Public Library

Payette Public Library

Valley of the Tetons Public Library

Salmon Public Library

STEMPOWERS

THE BROOKINGS REPORT, 2019

"Unfortunately, the education system in Idaho hasn't kept up with the human capital demands of local industry, forcing companies to expand elsewhere."
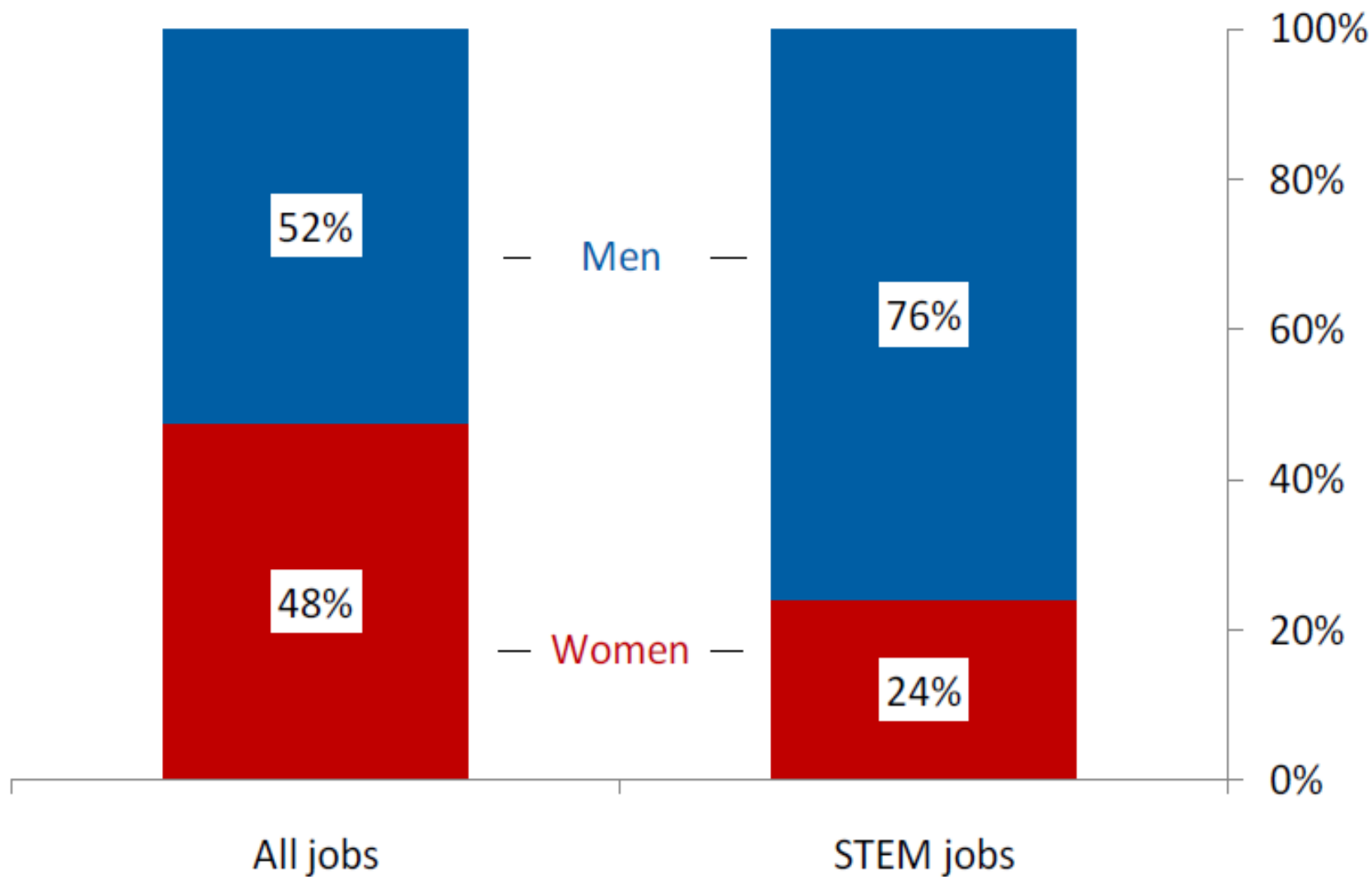
STEM PD for ALL

Our Impact in CS – 2nd in the Nation!

- Idaho has created a **state plan** for K-12 computer science.
- Idaho has established K-12 **computer science standards**.
- Idaho has **allocated funding** for rigorous computer science PD and course support.
- Idaho has clear **certification pathways** for computer science teachers.
- Idaho has a **dedicated computer science position** in the state education agency.

- Idaho has established programs at institutions of higher education to **offer computer science to preservice teachers**.
- Idaho requires that all secondary schools **offer computer science.**
- Idaho allows computer science to count for a **core graduation requirement.**
- Idaho allows computer science to count as a **core admission requirement** at institutions of higher education.

Percentage of Women and Men in ALL Jobs vs STEM Jobs

How Do Real-World Examples Change Girls' Perceptions of STEM?

Girls, Grades 5-12

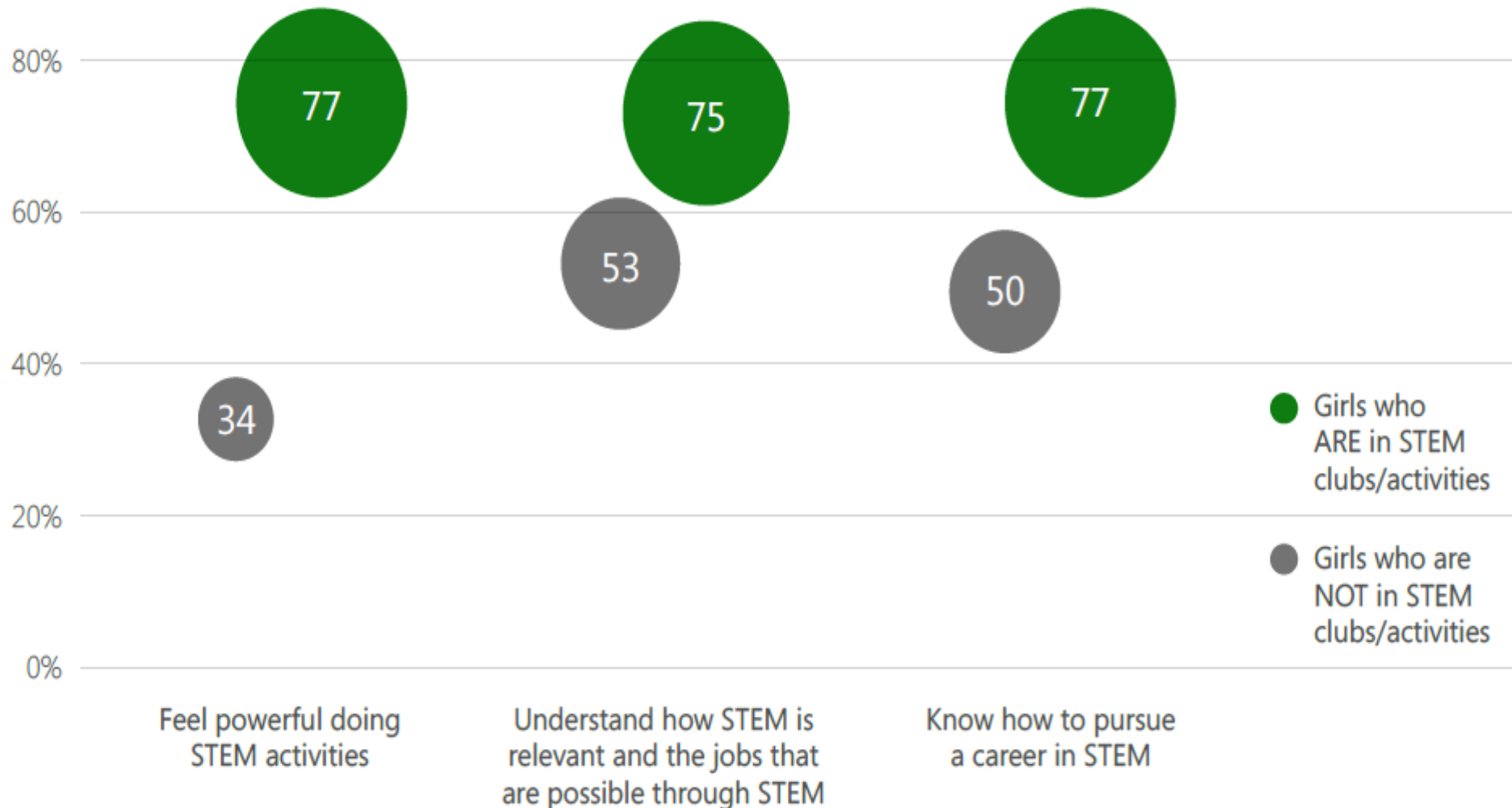|	Gets to be creative at their job	Has a job that does good things for the world
How would you describe a COMPUTER SCIENTIST?	**+17%** 44% ⟶ 61%	**+33%** 41% ⟶ 74%
How would you describe an ENGINEER?	**+14%** 49% ⟶ 63%	**+28%** 46% ⟶ 74%
How would you describe a MATHEMATICIAN?	**+24%** 19% ⟶ 43%	**+32%** 25% ⟶ 57%

● Before Examples   ● After Examples   ● +/– Change

What is the Benefit of STEM Learning Outside of the Classroom?

Girls, Grades 5-12

80%

77   75   77

60%

53   50

40%

34

● Girls who ARE in STEM clubs/activities

20%

● Girls who are NOT in STEM clubs/activities

0%

Feel powerful doing STEM activities   Understand how STEM is relevant and the jobs that are possible through STEM   Know how to pursue a career in STEM

What We Know
Family STEM/Career Awareness Events

Students

- 36% increase in awareness of STEM careers
- 83% want to study STEM in post-secondary
- 95% say STEM is fun!

Parents

- 92% believe their community should invest more in STEM
- 99% would like their child to pursue a STEM career
- 98% want their child to have access to a mentor

LITERACY for the 21ˢᵗ Century

Our Impact in STEM

	FY16	FY17	FY18
Student Engagements	10,428	204,000	406,239
Educator Interactions	1,200	4,800	12,680
Community STEM Events	36	140	143
Cash	$72,000	$205,000	$736,938
In-Kind	Did not track	$662,000	$1,742,217

The STEM Action Center funded APPROXIMATELY **50%** OF **INCOMING REQUESTS** due to current budget limitations.
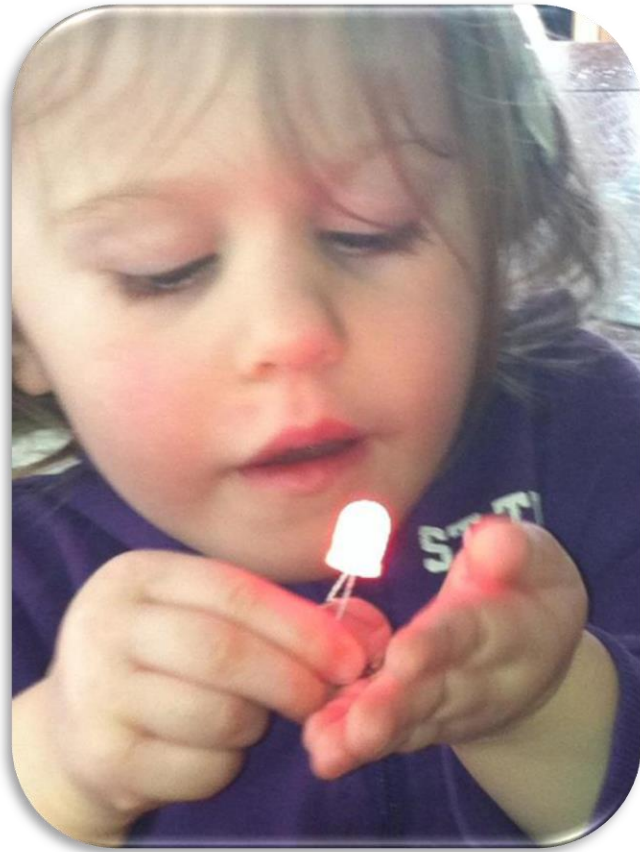
Public Private Partnership – Matching-Funds

P3 may provide up to 50% match of funding secured by public institutions

- Partner A brings forth Funder B (i.e. business)

- Funder B provides $10K funds to STEM AC

- STEM AC provides $15K funds to Partner A

stem.idaho.gov

Contact Information

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